BACK TO THE OLD SKOOL

Hell, everyone else is doing it, so we thought we'd join in on the old skool revival by brewing up our own choon using the sonic flavours of the time. Machine gun snare roll, anyone?

On the CD
All the MIDI files, audio, SR-202 kits and CM-101 patches you'll need are in the Tutorials folder

PC MAC

With the record stores awash with 'old skool' compilation CDs and programs like *Pump Up The Volume* and *I Love 1990* all over the telly, you could be forgiven for thinking that there's not much more to the retro revival than a bunch of 30-something ravers reminiscing about how they used to get off their bonces in a muddy field in Essex. It's all too easy to dismiss that particular genre out of hand, but to do so would be a mistake. When house music filtered over to Europe from of its birthplace in Chicago, the fledgling dance music scene suddenly came alive with creativity as DJs and musicians realised that they could make commercially viable music in their back bedrooms with nothing more than a few bits of cheap old equipment.

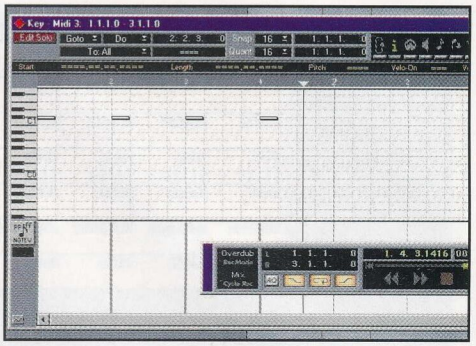
This DIY ethic meant that everyone could have their own take on the basic style, with the result that new sub-genres of dance music were being born almost monthly. Acid house, rave and hardcore, Italian piano house, the indie/house crossover – the list is almost endless, and we can trace the diversity and vibrancy of our current club culture back to these early days. In this tutorial we're going to take a potent handful of the basic stylistic flavours of the time and brew up our own old skool house tune. Rather than concentrating on achieving complete historical accuracy, we're hoping to rev up your inspiration a bit by looking at the mechanics of how to put a tune together with limited kit, and have some fun doing it. We're also going to look at jamming with some DJ-style techniques in your sequencer to help create the arrangement for a complete tune.

The gear required to follow this tutorial from start to finish is intentionally minimal. We're going to be using Cubase, our own CM-101 and SR-202 VST instrument plug-ins, IK Multimedia's SampleTank Free and some simple VST effects to make our tune. If you've got a different sequencer, don't panic – pretty much everything we'll be doing in Cubase can be easily translated to Logic, Sonar or any other sequencer for that matter. So don your smiley hooded top and let's get cracking!

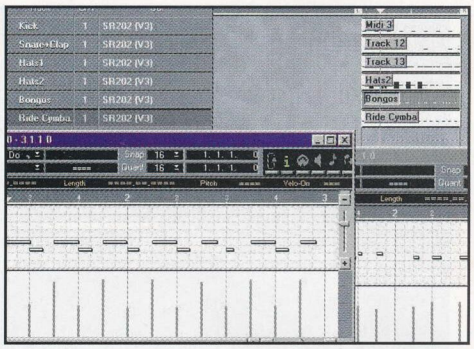
Old skool beats: nailing the rhythm section

1 Everything starts with a beat, so open an SR-202 drum machine and import Old Skool.202 using the Load button. Late 80s through mid 90s house used a far wider range of drum sounds than you might have thought, so the kit we're going to use is crunchy and digital – quite refreshing in a world of seemingly endless 808s and 909s.

2 We made our kit using a variety of old digital drum machines, including Roland's TR-707. A controlled use of SR-202's distortion on snares and claps plus a touch of bitcrushing on the cymbals adds some much needed snap and sizzle to the sounds. We've also used the filters to 'tune' certain sounds to narrower frequency spectrums for a more 'lo-fi' effect.



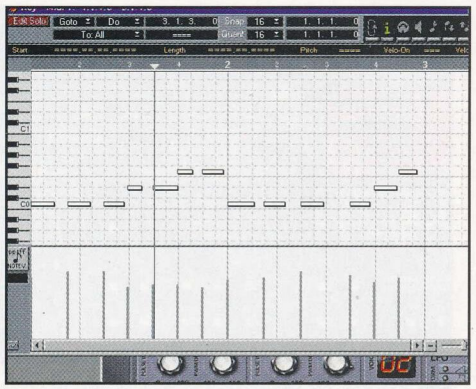
3 One of the limitations of early drum machines was that they were restricted to rigidly quantised 1/16-note patterns. To emulate this in a modern sequencer's arrange page, we're going to work with small blocks, forgoing all those funky groove quantising features. Put Cubase in cycle mode at around 124-128bpm and lay down a four-to-the-floor kick.



4 Next, using live recording, lay down a single bar of each new drum sound on separate tracks in your sequencer. If you've never worked with a basic drum machine before, you might need to practice a little, but concentrate on building up a solid, sparse groove and then adding embellishments like ride cymbals and bongos over the top. Work in layers.

5 We've put each drum sound on its own track so that we can use the mute switches to bring different sounds in and out. We'll be using this to create different paces, build-ups and breakdowns in our track. Experiment by going into cycle mode and using the mute and solo buttons on SR-202, DJ-style.

6 For the bassline, load up CM-101. We've set both oscillators to sawtooth, tuned the filter down low with only slight resonance, and set the envelope modulation high. The amplitude envelope is a simple sustain, and we've gone for a very short decay on the filter. This gives a deep bass sound with a 'plick' at the start. Perfect!

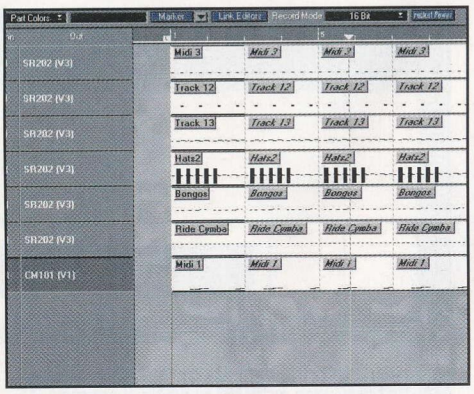


7 Experiment with sparse, simple one-finger riffs until you find something that locks into the drum groove nicely. One tip for an old skool flavour is to stick to a simple scale like C, E♭, F, G, B♭ and C. The early house pioneers were hardly jazz pianists, after all...

8 Using SR-202's multiple outputs, we've routed the hi-hats and bongos to the stereo output to keep their pan positions, and then sent the kick, snare and clap, and ride cymbal to three of the mono outputs. In the Cubase mixer we've routed the CM-101 bass, kick and snare to Group 1 rather than Master.

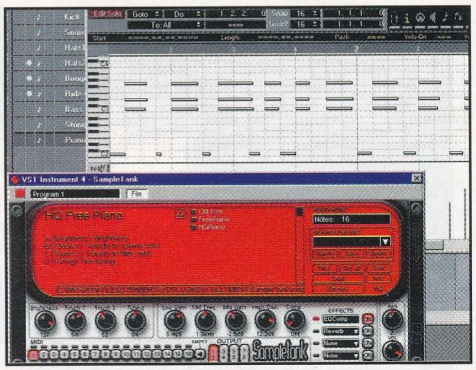
9 In order to get our rhythm section pumping we've used MDA's free Dynamics plug-in as in insert on Group 1. Set the threshold to around -20dB and adjust the Attack and Release to get the best balance between the drum transients and the overall 'pumping' effect. Finally, crank up the compressor's gain and play with the levels until the three instruments sit neatly together.

Old skool sounds: adding a hook and building the arrangement



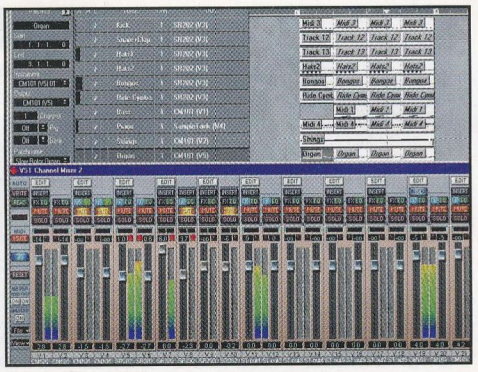
10 Now that we've got a rough groove going, it's time to extend our 16-note loop a bit. We've used the pencil tool in Cubase to create some ghost parts, and set the locators around this new 4-bar loop. Time to add a basic chord sequence...

11 Add another CM-101 for a warm string pad. We've tweaked the example patch Classic Analogue Strings to get exactly the sound we want, and laid down a very simple chord sequence for four bars. Our bassline plays a 'pedal' against the chord sequence, which is a classic technique to create some tension and interest in a tune.

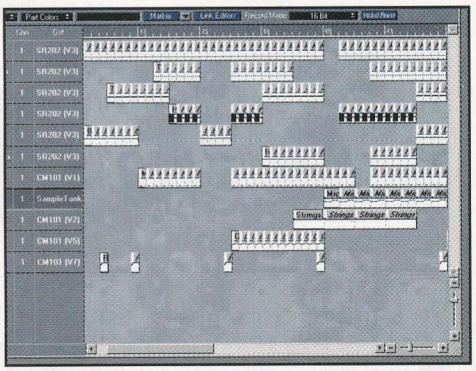


12 Every house track has to have a hook. Our first catchy riff will be a classic bouncy house piano line. Listen to a track like FPI Project's *Rich In Paradise* for a good example of this. To get a really authentic piano sound we've used SampleTank Free's HQ Piano from the *CM* issue 41 coverdisc.

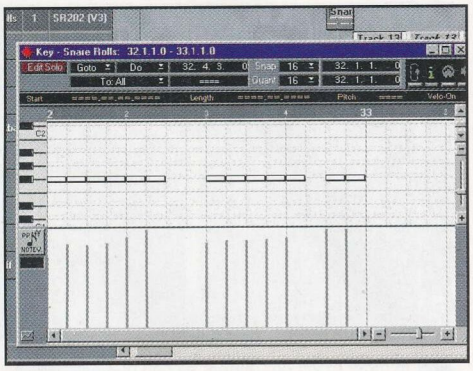
13 Another great house bass hook is usually played on a jazz organ type of patch, often from an FM synth. We've used another copy of CM-101, setting both oscillators to sine and transposing VCO 2 up an octave to get that authentic Robin S sound. The riff is only a bar long and uses the same basic scale as the bassline.



14 Bring up the Cubase mixer, and start playing with the mute switches. Drop parts in and out every few bars and think about building the track up, stripping it down and creating different feels. Everything should start to come together and gel at this point and you should be able to 'perform' your tune live just by playing the mutes.



15 Once you've worked out which riffs work well together and the order of the different sections in your tune, lay it all out in a new arrangement in Cubase and save it under another name. This way you can always go back to your basic track and try out some more ideas if you get stuck.

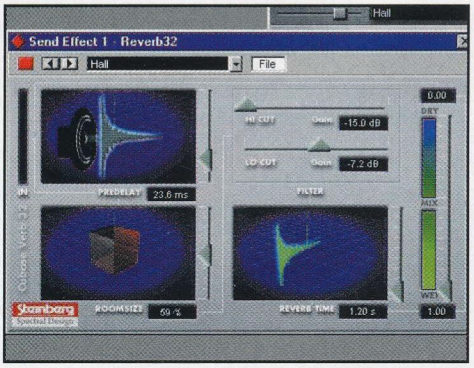


16 The remaining task needed to complete our basic arrangement is to add fills and section breaks. Drum and bassline fills are vitally important to work up the tension leading into breakdowns and in the build-ups, so use them freely. Although machine-gun snare rolls are a cliché, this is an old skool track, so don't be shy!

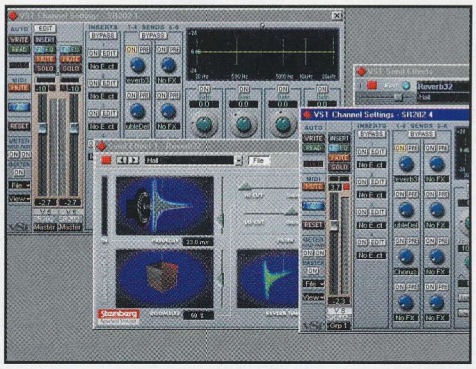
17 For a final bit of ear candy we've added another CM-101 and created a decaying filter patch. This time, a bit of detune has been used for a fatter sound, and the filter has the resonance turned up with a slow decay. We've also used a long release time on the amplifier. The sound is used on an upward climbing arpeggio at key points in our tune.

18 CM-101, SR-202 and SampleTank all offer the option to cut back polyphony. We've used this feature on some of our riffs to stop releasing notes from overlapping each other. This saves considerable CPU cycles, and since we haven't added much in the way of FX yet, we need all the headroom we can get.

Old skool mix: adding EQ and FX



19 With our arrangement complete, it's time to work on the mix balance and effects. First we're going to need some reverb, so load up Reverb32 as a send effect and call up the Hall preset. This'll need a little editing for our purposes, so cut the brightness with the hi-cut slider, and reduce the reverb time to about 1.2 seconds.



20 Since we've got the drums on separate outputs, we can treat them all differently. Add some generous reverb to the snare and claps channel, leave the kick alone and use reverb sparingly on the stereo output (bongos and claps). Check the overall sound by muting everything else and just focusing on the drums.

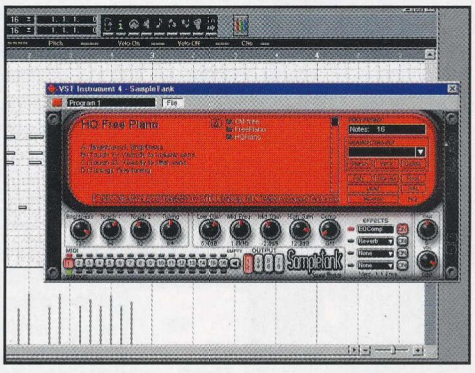
21 Synth pads can benefit a lot from modulation FX like chorus. We're using the Cubase chorus with the Wide preset quite heavily on our string pad. We've also added a bit to the Piano to make it a sound a bit cheesier. Another little bit on the organ bass sound and our mix is coming together.

22 The other main effect we're going to use is delay. This is great for adding extra cross-rhythms to a riff as well as adding stereo width. The Cubase Double Delay plug-in has stereo panning and syncs to tempo automatically, so it's ideal (when used heavily) for adding extra rhythmic movement to our jazz organ riff.

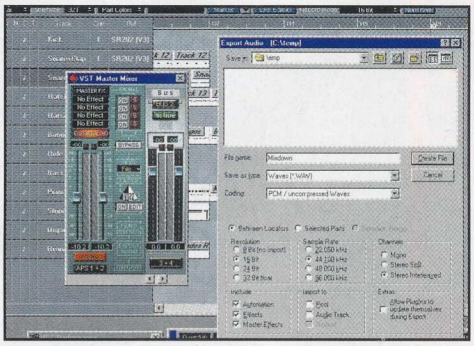
23 Sticking with the jazz organ line for a moment, it seems to be indistinct in the mix. Sine wave-type sounds can often suffer from this, so we've added some heavy compression as an insert effect, again using MDA's excellent free Dynamics plug-in. Alternatively, we could route this sound to Group 1 to save on CPU if needed.

24 With dance tunes, the bass end can often get muddy and indistinct. Thankfully, our sounds complement each other quite well, so apart from a 'rumble cut' below 30Hz and a slight notch at 450Hz we can leave the bass end pretty much alone. If you want the snare to cut through a bit more, try boosting around 2kHz.

25 The pad is acting like a thick blanket in the mix so we're going to use EQ to help it sit better. As you can see, we've rolled the bass off from about 500Hz downwards, and added a peak at around 800Hz to keep the pad more distinct from the piano riff.



26 The SampleTank piano is the focus of our song, so we want to give it some sparkle to make it stand out. The chorus we've added can make a sound sit further back in the mix, so a generous boost at 12kHz and a cut in the mids around 1.8kHz makes our piano thinner and more upfront.



27 Time for the final mixdown. No doubt there are a few sections in the tune where we'll want certain instruments to be a bit louder or a bit quieter. Cubase's mix automation is great because you can practise before committing yourself. Since we've only used VST instruments, all that remains to do is hit Export Audio and we're done!

PYMCA

RAVE ON!

Our old skool Chicago house tutorial was so popular that we've decided to plunder the past again, this time showing you how to concoct your very own deadly acid techno tune…

On the CD
All the audio, patches and files you'll need to 'get on one' with this intermediate level, step-by-step tutorial

PC MAC

What a shame it is that the whole white gloves and smiley T-shirt image is the only thing most people can still remember about acid house. The legacy of acid house and acid techno lives on every single time you reach for one of those real-time controllers on your synth and start to tweak the cutoff.

The story goes something like this: back in 1987, a Chicago band called Phuture got themselves a small, silver Roland TB-303 bass synth from a second-hand shop for a knock-down price. They puzzled over its arcane 16-note step sequencer and lamented its naff, twangy 'bass guitar' sound, guessing that the price they'd paid for it had been pretty much a good estimation of its true musical value.

Some time later, with a more or less random pattern looping endlessly, Phuture's DJ Pierre started to fiddle with the cutoff and resonance controls of the 303 and both accidentally and instantly created an entirely new musical genre. The story stretches credibility a little, but it's one of the most oft-repeated bits of Chicago legend, and no other story as to how acid really started has so far emerged.

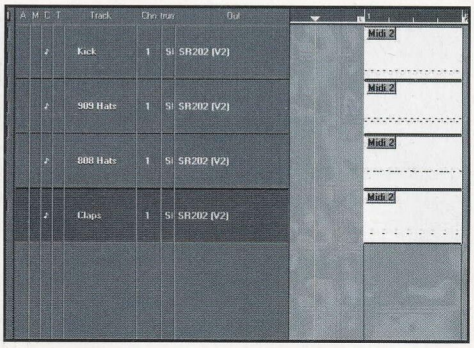
In this tutorial, we're going to strip the acid genre back to its basic stylistic roots: the beats, the bass and the bleeps. Taking our cue from seminal techno albums like *101+303+808=Now Form A Band* from the Sabrettes, and Hardfloor's *TB Resuscitation*, we're going to give a slightly more modern, techno-ish slant to the genre.

Keep in mind that historical accuracy is definitely not the priority here. We're aiming to show you how to get a really good sound using nothing more than some free VST plug-ins and your computer. For the tutorial, we're going to be using Steinberg's Cubase, the fabulous CM-101 and supreme SR-202, plus Muon Software's Tau Bassline (you'll find the latter three on the cover CD-ROM in our regular Library section). If you aren't a Cubase user you can still join in the fun, as there's nothing we're going to be doing that can't be easily translated to any other respectable, VSTI-hosting sequencing package.

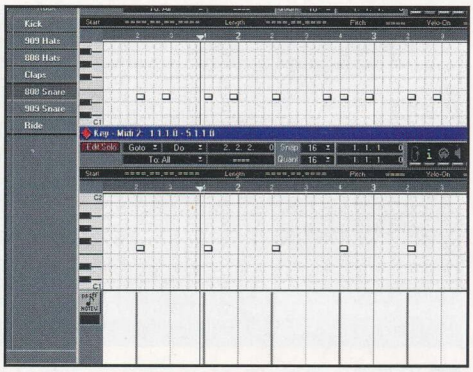
Acid beats: nailing the rhythm section

1 To provide a rock solid foundation for our tune, fire up SR-202, load the Acid.202 kit from the cover CD and lay down a four-on-the-floor beat with the kick. Set the tempo to about 133-135bpm, and remember (since we're emulating old-fashioned analogue gear) to use a rigid 16th-note quantise and keep the velocities even.

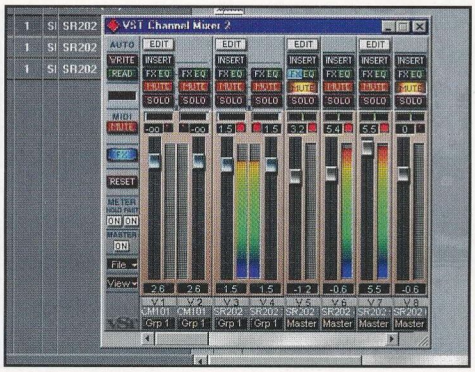
2 The standard 909 kit forms the foundation of our drum set, but we've replaced a few key sounds and processed things a bit. Since we need a more driving beat, the kick has been treated with a little distortion, and some 909 hats, claps and snares have been drafted in to beef up the proceedings.



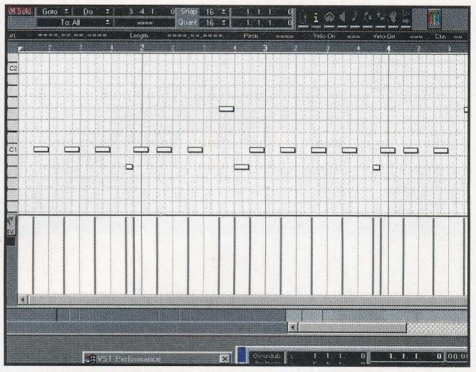
3 Each drum sound has been put onto its own separate lane in the sequencer in order to make it easier to work in layers. Painting drum hits using the Drum or Key Edit isn't a lot of fun, so stick your sequencer in cycle mode and play the drum hits in yourself from your MIDI keyboard.



4 To get a driving feel, we've used the harder 909 snare on the downbeats, with the smaller, tighter 808 snare playing little syncopated accents in the gaps. This combination works very well when played with the heavy, distorted kick drum and clunky open hi-hats on the off-beat.

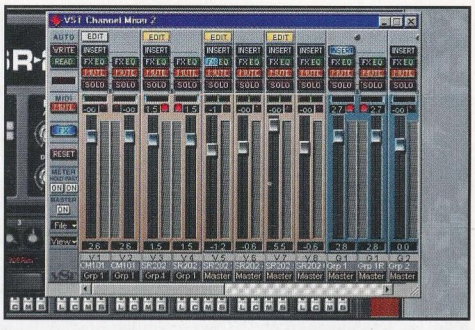


5 Since we will be muting and unmuting different drum sounds as we go, we need quite busy patterns. In our example, the ride cymbal plays a straight 16th-note part over the top, and finally, the 808 cymbals play a funkier, sparser riff to add some high-frequency interest. Remember, not all of the sounds will play at once.

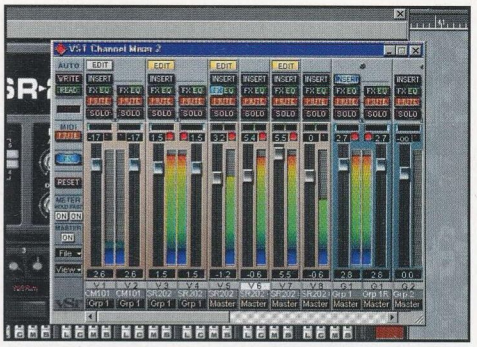


6 We've programmed a sub-bass sound in CM-101 to sure up the foundation of our tune. The filter envelope has a slight attack to it, and the sine wave is used on VCO2 to add lots of bottom end. Such a powerful sound can easily muddy the mix, so it's only played on the offbeat in between the kick drums.

7 The exact balance and tone of the sub-bass sound has been chosen so that it complements the kick drum exactly. Too sharp an attack or too much resonance would mean that the sound could start to feel a bit too 'bouncy'. Since we want a driving, four-on-the-floor feel, the attack has been rolled off and the filter resonance is almost fully off.

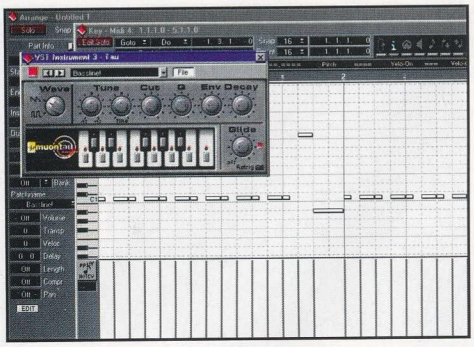


8 Since SR-202 has multiple outputs (in sequencers that support this), route the kick drum to Output 1, and then in the Cubase mixer, route that SR-202 channel (along with CM-101) to Group 1. Insert your favourite compressor on the group channel and set it up so the two sounds start to blend properly. A typical setting would be a slow attack (to preserve the drum transients) and quite a quick release to make the mix pump.

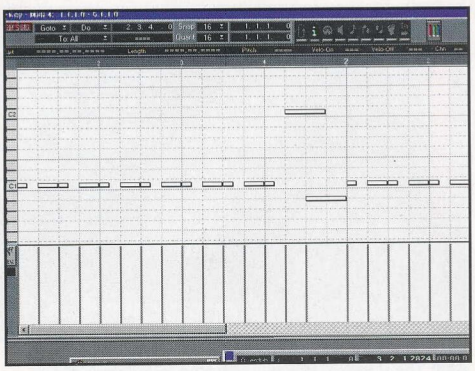


9 To create some more scope for applying FX when we mix down later on, we've routed a number of other sounds to SR-202's mono outputs. The handclaps and 808 hi-hats have been assigned to Output 1, the 909 hats to Output 2 and the two snares to Output 3. Note that the pan controls on SR-202 have no effect if the sound is going to a mono output.

Acid sounds: adding bass and lead lines

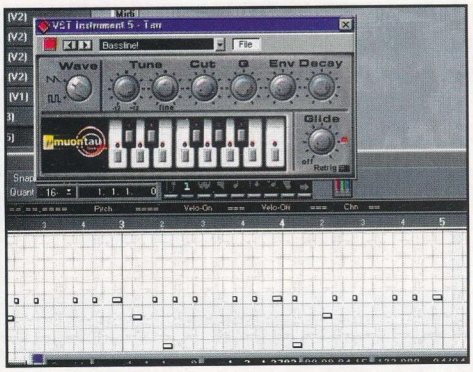


10 Load a Tau Bassline into the VST instrument rack and set up a sound with high resonance and a low cutoff. Increase the decay time a little and leave the envelope modulation quite low. To get a really driving, pulsating feel, we've made each note only 1/32 long. This is pretty hard to play, so get your mouse out and get busy with the Key Edit.

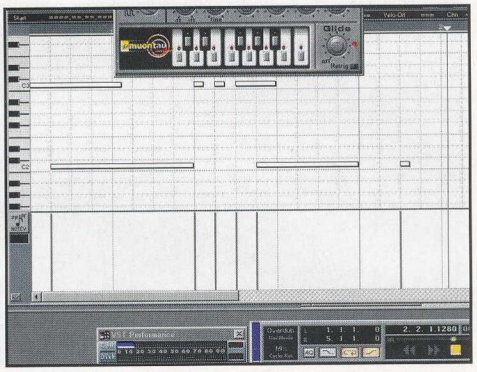


11 Although our riff is very simple, we can add some interest with Tau's Glide feature. To get some typical 303 slide into your riff, all you need to do is have some overlapping notes in the sequence and make sure the Glide time is turned up. Used sparingly, this will add a a lot of realism to our virtual 303 bassline.

12 To finish off, load Tau's companion plug-in – M-Drive – as an insert on this channel. The controls on this distortion plug-in are a little odd, but the sweetest distortion can usually be had if you set the Threshold knob almost fully to the left and the Clipshape knob between halfway and fully right. There you have it: the classic distorted acid bass sound.

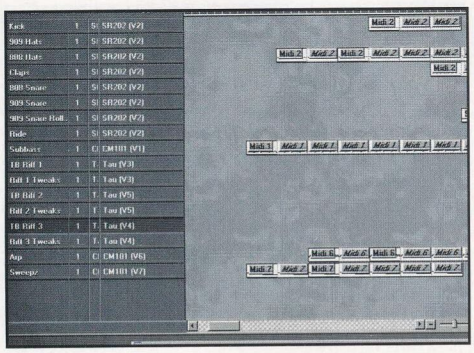


13 Some very early acid tunes had little more than drums, bass and 303. We're going to develop things a little more and layer up another 303 line. Tau is capable of quite a wide range of tones, so to complement our distorted bass, try a softer, clean sound with no distortion. Our new riff is also an octave higher and more melodic.

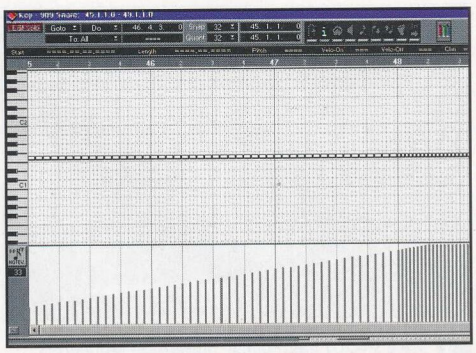


14 Time for a lead riff. Another Tau Bassline is pressed into service, this time playing a sound with a long glide and a long decay. A long, one-octave slide has been programmed to create a dive bombing pitch effect. Later on, some furious knob tweaking will help add some life to this lead part.

15 We'll stick with the DJ-style technique we explored in our first old skool tutorial (issue 43), so stick your sequencer in cycle mode and mute all the tracks. Next, bring different sounds in and out just using the Mute and Solo switches. This is a hell of a lot of fun, and you'll start to hear which parts of your tune work best together and come up with different sections for your overall tune.



16 Once you've got some rough ideas together, save a copy of your basic tune as a separate file so you can always refer back to it if you need to. Then, using the pencil tool, put in ghost parts in the Arrange page to create your overall song structure. You might find it useful to work in sections, thinking of the song in terms of a start, a middle and an end.

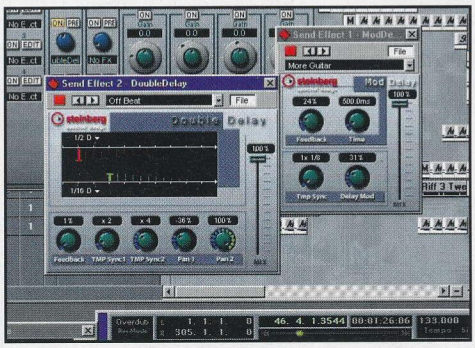


17 Don't forget that 'bridging' the various sections of your song should be build-ups and breakdowns. Cheesy machine gun snare rolls are most definitely the order of the day in this kind of tune, so use them with gay abandon. Since SR-202 has filters and transpose controls on each pad, you can also go quite mad and screw with the sound as the crescendo develops.

18 Screwing with the sound is actually one of the main occupations when building an acid tune. After all, we've got no chord changes and very little progression in our song so far! With Tau Bassline, you should be experimenting with the Cutoff, Resonance, EnvMod and Decay controls, changing them as the riff loops to create those build-ups and breakdowns.

Acid sounds: time to get trippy

19 To record your knob tweaks in Cubase, make sure the MIDI SysEx filter is switched off, and don't forget to create a new lane in the sequencer so your tweaks don't get mixed up with your riffs. It's also handy to save copies of your initial synth settings as a patch; you can reload it when you want to play the tune from the top.

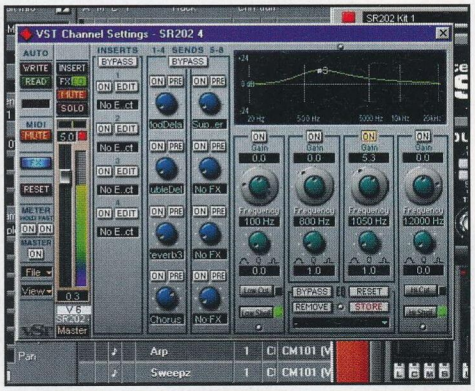


20 Now that everything's cooking nicely, some 'effect spices' are most definitely required. Delay is fantastically useful for adding some 'trippyness' to our acid bass parts and drums. The 808 snare and clap have been routed to a short, tight slap-back delay, whereas the lead Tau sound has been processed with a much longer, panning delay.

21 The raw sound of the Tau Bassline doesn't quite have the same 'chewy' edge as the original Roland TB-303. This can be improved considerably by fattening the sound up with some chorus. Reverb can help to push some sounds slightly towards the back of the soundstage (as well as add stereo width), so we've applied lashings of it to the softer of our TB parts.

22 To provide some 'ear candy' during the intro of the tune, we've put in a last-minute addition. The Roland Juno 60 is a classic synth with a built-in arpeggiator. Use CM-101 to layer up sawtooth and square waves. Detune generously and set a 'plucked' envelope shape for filter and amp. This will simulate a typical Juno arpeggiator sound very nicely.

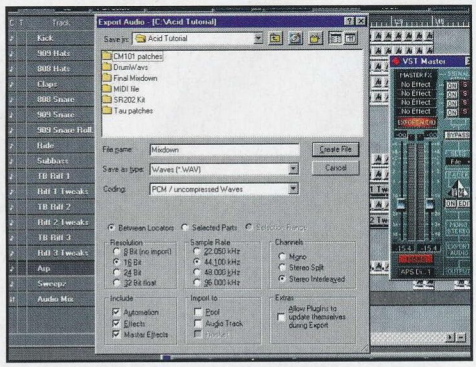
23 The arpeggiator sound needs a bit of beefing up as well, so route it through the chorus and delays too. To create even more movement, we've assigned a sine wave LFO to the filter, which slowly sweeps the cutoff up and down. A phaser set to a slow, tempo-synchronised sweep puts the icing on the cake. Remember, most soft synths cry out for lashings of effects...



24 EQ is important in getting a mix sounding right. Given our instrumentation, there's a bit of a 'hole in the middle' effect going on as there's not much mid-range action. To counter this, a little 1-2kHz boost on the snares and one of the TB lines will help even things out.

25 The 909 hi-hat is capable of quite a varied sound, from very brash to long and soft. For our tune, we want a housey, tight sound, so a little boost at 12kHz and careful setting of the decay control in SR-202 will go a long way. The same treatment for the ride cymbal adds a little sparkle, too.

26 Setting the fader balance at one level for a whole song is never going to be a good idea (even in dance music, which is typically compressed to a flat line on mixdown). Using VST automation in a Mix track makes it easy to pick a 'focus' riff for each section in your song, giving it a little boost to bring it to the front when the time comes.



27 Finished! Our acid tune is fully automated and full of lovely tweaking. Since it's all done with virtual instruments, we can simply mix it down straight to a .wav file for mastering. Import the file into your favourite audio editor and get your most sumptuous compressor ready to add the final gloss.